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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,238	03/12/2004	Robert John Phillips	1-25078	8831

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EXAMINER

BRANDT, ADAM CURTIS

ART UNIT PAPER NUMBER

3771

DATE MAILED: 12/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/800,238	<b>Applicant(s)</b> PHILLIPS, ROBERT JOHN	
	<b>Examiner</b> Adam Brandt	<b>Art Unit</b> 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-16, 22 and 23 is/are rejected.
- 7) ☒ Claim(s) 17-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 3/12/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/GB03/00727, filed on 2/21/2003.

### ***Information Disclosure Statement***

2. This office acknowledges receipt of the following items from the applicant: Information Disclosure Statement (IDS) filed 3/12/2004. The references cited on the PTO 1449 form have been considered.

### ***Claim Objections***

3. Claims 13-21 are objected to because they are dependent on cancelled claims. For examining purposes, claims dependent on cancelled claim 1 are assumed to be dependent on claim 12; claims dependent on cancelled claim 2 are assumed to be dependent on claim 13; claims dependent on claim 3 are assumed to be dependent on claim 14; claims dependent on cancelled claim 6 are assumed to be dependent on claim 17; claims dependent on cancelled claim 7 are assumed to be dependent on claim 18. Appropriate correction is required.

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4. Claim 21 is objected to because of the following informalities: In lines 3 of the claim, the Applicant has typed "I:X". It is believed the applicant meant --1:X--. Appropriate correction is required.

5. Claim 22 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 12. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 12,13,14,16,22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamlin (4,960,119).

As to claim 12, Hamlin discloses a breathing gas supply system for supplying breathable gas in an aircraft (column 2, lines 44-46) including an oxygen enriching apparatus (column 2, lines 48-51) which is operable in at least two modes to provide product gas with varying oxygen concentrations (column 4, lines 20-27), a first feed line (37) to feed more highly enriched product gas to one or more breathing gas outlets (40), and a second feed line (28) to feed less

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highly enriched product gas for breathing(30), and a controller (15) to control the oxygen enrichment apparatus to provide highly enriched product gas to the breathing gas outlet or outlets in the first mode of operation or less highly enriched product gas for breathing (column 4, line 65 to column 5, line 7), and to control a diverter valve (25) which directs the product gas to the respective feed line.

As to claim 13, Hamlin discloses during the first mode of operation the more highly enriched product gas is fed to a plurality of gas outlets(58, column 5-6, lines 68-3) and in column 5, lines 26-31 the second mode of operation the less highly enriched product gas is fed to an aircraft cabin for breathing during normal high altitude flight. Column 4, lines 27-31 teaches that gas is drawn from the storage tank during normal operation. Column 5, lines 26-31 teaches that the storage tank is mounted on an aircrew members seat. Inherently, the aircrew member's seat is located the cabin.

As to claim 14, Hamlin discloses a system with an oxygen enriching apparatus including a plurality of molecular sieve beds which are operable cyclically to adsorb non-oxygen gas during a charging phase to produce product gas for breathing, and de-adsorb non-oxygen gas to atmosphere during a venting phase to clean the bed of non-oxygen gas (column 4, line 65 to column 5, lines 7), the product gas produced in the second mode of operation having about a 40-60% oxygen concentration, whilst the product gas produced in the first mode of operation has about a 70-90% oxygen concentration (column 4, lines 20-26).

As to claim 16, Hamlin discloses the product gas produced in the second mode of operation is diluted for use by being diluted for use with recirculated cabin air prior to introduction into the cabin for normal breathing so that the oxygen concentration of the air

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breathed normally in the cabin is not significantly greater than that of ambient air (column 3, lines 64-68).

As to claim 22, Hamlin discloses an aircraft (column 2, lines 44-46) including a breathing gas supply system for supplying breathable6) including an oxygen enriching apparatus (column 2, lines 48-51) which is operable in at least two modes to provide product gas with varying oxygen concentrations (column 4, lines 20-27), a first feed line (37) to feed more highly enriched product gas to one or more breathing gas outlets (40), and a second feed line (28) to feed less highly enriched product gas for breathing(30), and a controller (15) to control the oxygen enrichment apparatus to provide highly enriched product gas to the breathing gas outlet or outlets in the first mode of operation or less highly enriched product gas for breathing (column 4, line 65 to column 5, line 7), and to control a diverter valve (25) which directs the product gas to the respective feed line.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
10. Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin (4,960,119).

As to claim 15, Hamlin discloses a system with an oxygen enriching apparatus including a plurality of molecular sieve beds which are operable cyclically to adsorb non-oxygen gas during a charging phase to produce product gas for breathing, and de-adsorb non-oxygen gas to atmosphere during a venting phase to clean the bed of non-oxygen gas (column 4, line 65 to column 5, lines 7), the product gas produced in the second mode of operation having about a 50% oxygen concentration, whilst the product gas produced in the first mode of operation has about a 80% oxygen concentration (column 4, lines 20-26).

Hamlin does not specifically recite the particular oxygen concentrations of 50% for mode 2 and 80% for mode 1. The Applicant's disclosure does not provide criticality to why the values of 50% and 80% oxygen enrichment would function better than any other value. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to cycle the sieve beds so that they would provide any specific oxygen enrichment level to maximize the efficiency of the system.

As to claim 23, Hamlin discloses the structure of the invention identical to the rejection pertaining to claim 12 (see above). The method steps would have been obvious because they would have resulted from the use of the system of Hamlin.

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*Allowable Subject Matter*

11. Claims 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam Brandt whose telephone number is 571-272-7199. The examiner can normally be reached on 8:30 AM to 4:30 PM; Mon thru Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 571-272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACB

  
TEENA MITCHELL  
PRIMARY EXAMINER

  
Adam Brandt  
Examiner  
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